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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,871	02/07/2000	John Ellis	081862.P160	1846

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EXAMINER	
JUNG, MIN	

ART UNIT	PAPER NUMBER
2663	13

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/499,871	Applicant(s) ELLIS ET AL.	
	Examiner Min Jung	Art Unit 2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-8, 10-18, 20-28, 30-38, 40-48, and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamami, 5,959,972.

Hamami discloses a port/link redundancy scheme in an ATM switch. Specifically, regarding claims 1, 11, 21, and 31, Hamami teaches an apparatus for re-routing user connections between first and second nodes in a network switch (Fig. 2), the apparatus comprising: a loop-back path (the virtual circuit shown by the dashed line, 114) to provide connectivity between the first and second nodes, the first node having a primary connection (virtual circuit 68, col. 5, lines 48-50) and a secondary connection (paths

114, 65, and 118, col. 5, lines 50-52), the primary connection carrying the user connections during a normal mode (col. 5, lines 48-50), the secondary connection not using network bandwidth during normal mode (all the traffic at the backup link port is blocked until a main link failure event occurs, col. 6, lines 14-16); and a switching element coupled to the loop-back path and the first node to switch the connectivity from the primary connection to the secondary connection when there is a failure at the primary connection (the switching is performed at the switch matrix 30, col. 4, lines 38-49, col. 5, lines 48-52, and col. 7, lines 4-17).

Regarding claims 2, 12, 22, 32, and 42, Hamami further teaches the physical connection (link) and the logical connection (virtual circuit).

Regarding claims 3, 13, 23, 33, and 43, Hamami teaches that the failure condition is detected at the port (col. 6, lines 64-66).

Regarding claims 4, 5, 14, 15, 24, 25, 34, 35, 44, and 45, Hamami teaches the rerouting control switching based on connectivity status (col. 6, line 64 – col. 7, line17). The re-route handler reads on the ports and the controller including control software. The connectivity is monitored by the ports.

Regarding claims 6, 16, 26, 36, and 46, Hamami teaches that the backup connection is idle during normal operation (col. 4, lines 39-42, and col. 6, lines 14-16).

Regarding claim 7, 17, 27, 37, and 47, Hamami's teaching is based on ATM switching environment (Title).

Regarding claims 8, 18, 28, 38, and 48, Hamami teaches virtual path connection (teaching of virtual circuit, and also VP/VC is inherent in ATM).

Regarding claims 10, 20, 30, 40, and 50, the primary connection and the secondary connection having equal capacity is inherent since it is not stated otherwise.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 9, 19, 29, 39, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamami in view of Anderson et al., 5,838,924 (Anderson).

Hamami as briefly described above, fails to specifically teach OAM monitor. OAM is used as a means for operation and maintenance of a network. Hamami, instead of the specific teaching of OAM, uses 'keep alive messages' on the periodic basis, to monitor the failure condition. See col. 6, lines 28-57. Anderson, on the other hand, specifically utilizes OAM cells to detect failure in VP connection. See Abstract, and col. 3, lines 23-24. Anderson's teaching is also based on the connection protection switching in ATM environment. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to implement the system of Hamami by replacing the messaging including keep alive messages with the OAM technique as taught by Anderson to utilize standard monitoring scheme in the system.

Response to Arguments

5. Applicant's arguments filed April 12, 2004 have been fully considered but they are not persuasive.

Regarding examiner's rejection based on 36 USC 102(e), applicant again argues that Hamami does not disclose a loop-back path connecting a first node and a second node where the first node has primary and secondary connections. Applicant alleges that "Hamami merely discloses a virtual circuit located within the switch matrix ----" and that "This virtual circuit therefore merely acts to direct the traffic to the backup link upon failure", and therefore, "Hamami does not disclose a loop-back path to connect a first node having primary and secondary connections to a second node." And, applicant further stresses this point by reiterating that "Hamami merely discloses a virtual circuit to connect the traffic from the main link to the backup link". Examiner read the loop-back path of 114 on the claimed loop-back path. The traffic is redirected from the main connection to the backup connection using this path. This teaching of redirection of traffic using the specific path for redirection meets the limitation "loop-back path". If there is a distinct and novel meaning to the claimed loop-back path, it has not been claimed. The loop-back path shown in Figs. 1 and 2 (and described in the specification) of the present invention is shown as a semi-circle in the path connecting second node and switch element, and does not show any specific operational aspect of loop-back, which would prevent from using a reference with similar switching scheme as the Hamami reference. Therefore, Hamami reference is deemed to teach the invention claimed.

Further, regarding the newly added limitation of "the secondary connection not using network bandwidth during the normal mode", applicant argues that Hamami's backup link uses the network bandwidth since a keep alive virtual circuit is established between the backup link ports, and all the traffic directed to the main link port is duplicated to the backup link port. Examiner disagrees. Firstly, the keep alive virtual circuit is not the virtual circuit, which would carry the redirected traffic, but is a virtual circuit established in addition to the backup virtual circuit for detection and maintenance purpose. See col. 6, lines 28-44. Secondly, the portion of the teaching in Hamami (col. 6, lines 1-2) that applicant relies on as a support for his position that the backup link uses the network bandwidth is not a relevant portion of teaching which is applicable to the bandwidth usage. That portion describes a virtual circuit setup stage. Once the virtual circuits have been established, all ingress traffic at the backup link port is blocked until a main link failure event occurs. See col. 6, lines 14-16.

Applicant's argument regarding the rejection based on 35 USC 103 is also directed to the alleged deficiency in Hamami's teaching on "loop-back path". Therefore, applicant's attention is directed to the same explanation given above. The ground for combining Hamami and Anderson is clearly stated in above rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 703-305-4363. The examiner can normally be reached on Monday-Friday, 7AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
May 27, 2004

Min Jung
Primary Examiner